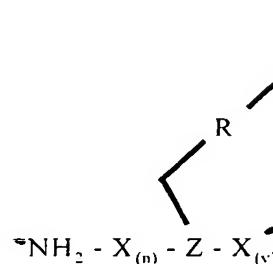


WHAT IS CLAIMED IS:

1. A cyclic peptide comprising the structure:



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wherein X is selected from the group consisting of an amino acid, an amino acid analog, a peptidomimetic and a non-amide isostere, Z is selected from the group consisting of a synthetic amino acid and a biosynthetic amino acid, R is selected from the group consisting of oxygen, nitrogen and carbon, n is 0 to 10 and y is 1 to 10.

2. A cyclic peptide comprising the amino acid sequence of $\text{NH}_2 - \text{X}_{(n)} - \text{Z} - \text{X}_{(y)} - \text{COOH}$ and a cyclic bond between the Z residue and COOH other than a thioester bond, wherein X is selected from the group consisting of an amino acid, an amino acid analog, a peptidomimetic and a non-amide isostere, Z is selected from the group consisting of a synthetic amino acid and a biosynthetic amino acid, n is 0 to 10 and y is 1 to 10.

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3. The cyclic peptide of claim 2, wherein Z has a side chain comprising oxygen, nitrogen or carbon.

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4. The cyclic peptide of claim 2, wherein the cyclic bond is a lactam or lactone bond.

5. The cyclic peptide of claim 1 or claim 2, wherein the cyclic peptide is capable of inhibiting the *agr* response.

6. The cyclic peptide of claim 2, wherein the cyclic peptide is capable of inhibiting the *agr* response.

7. The cyclic peptide of claim 1, wherein y is 4.

8. The cyclic peptide of claim 2, wherein y is 4.

5 9. The cyclic peptide of claim 7, wherein the peptide has an amino acid sequence that comprises G-V-N-A-X-S-S-L-F (Seq.ID No.:1), G-A-N-A-X-S-S-L-F (Seq.ID No.:2), G-V-A-A-X-S-S-L-F (Seq.ID No.:3), A-V-A-N-X-S-S-L-F (Seq.ID No.:4), G-V-N-A-X-A-S-L-F (Seq.ID No.:5), G-V-N-A-X-S-A-L-F (Seq.ID No.:6), G-V-N-A-X-S-S-A-F (Seq.ID No.:7) or X-S-S-L-F (Seq.ID No. 8).

10 10. The cyclic peptide of claim 8, wherein the peptide has an amino acid sequence that comprises G-V-N-A-X-S-S-L-F (Seq.ID No.:1), G-A-N-A-X-S-S-L-F (Seq.ID No.:2), G-V-A-A-X-S-S-L-F (Seq.ID No.:3), A-V-A-N-X-S-S-L-F (Seq.ID No.:4), G-V-N-A-X-A-S-L-F (Seq.ID No.:5), G-V-N-A-X-S-A-L-F (Seq.ID No.:6), G-V-N-A-X-S-S-A-F (Seq.ID No.:7) or X-S-S-L-F (Seq.ID No. 8).

11. A composition comprising the peptide of claim 1 and a carrier.

12. A composition comprising the peptide of claim 2 and a carrier.

13. A pharmaceutical composition comprising the peptide of claim 1 and a pharmaceutically acceptable carrier.

20 14. A pharmaceutical composition comprising the peptide of claim 2 and a pharmaceutically acceptable carrier.

15. The pharmaceutical composition of claim 13, wherein the carrier is selected from the group consisting of a diluent, an aerosol, a topical carrier, an aqueous solution, a nonaqueous solution, and a solid carrier.

16. The pharmaceutical composition of claim 14, wherein the carrier is selected from the group consisting of a diluent, an aerosol, a topical carrier, an aqueous solution, a nonaqueous solution, and a solid carrier.

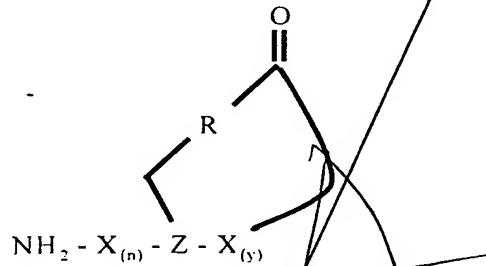
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17. A method for treating *S. aureus* infection in a subject comprising administering to the subject an amount of the pharmaceutical composition of claim 15 effective to treat the infection.

10 18. A method for treating *S. aureus* infection in a subject comprising administering to the subject an amount of the pharmaceutical composition of claim 16 effective to treat the infection.

19. A method for the preparation of a cyclic peptide comprising the structure:

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wherein X is selected from the group consisting of an amino acid, an amino acid analog, a peptidomimetic and a non-amide isostere. Z is selected from the group consisting of a synthetic amino acid and a biosynthetic amino acid, R is selected from the group consisting of oxygen, nitrogen and carbon, n is 0 to 10 and y is 1 to 10, said method comprising:

A. assembling the linear constituents of the peptide under preparation on

5 a PEGA resin support to form a protected and bound peptide chain;

B. treating the peptide chain of Step A to cause deprotection thereof;

C. treating the deprotected peptide of Step B with buffer at a neutral pH for a period of time sufficient to cleave said peptide from said solid phase support and to form said cyclic peptide; and

D. recovering said cyclic peptide.

10 20. A method for the preparation of a cyclic peptide in accordance with Claim 1, which comprises:

A. assembling the linear peptide chain corresponding in composition to said cyclic peptide on to a solid phase resin support containing 3-mercaptopropionamide-polyethylene glycol-poly-(N,N₄-dimethacrylamide)(HS-PEGA) to form a protected assembled peptide;

B. treating the protected assembled peptide of Step A to deprotect said assembled peptide;

C. treating the deprotected peptide of Step B with aqueous buffer at a pH of about 7.0 for a period of time sufficient to form said cyclic peptide and to cleave said peptide from said solid phase resin support; and

D. recovering said cyclic peptide.

15 21. The method of Claim 19, wherein said solid phase resin support comprises BOC - AA - (linear assembled peptide)-PEGA.

20 22. The method of Claim 19, wherein the treatment of Step B is performed with HF for about 1 hour.

23. The method of Claim 19, wherein the treatment of Step C is performed with a buffer comprising Na₂PO₄ and acetonitrile.

25 24. The method of Claim 22, wherein the treatment of Step C is performed for about 12 hours.

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